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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,209	10/30/2001	John J. Light	10559-538001/P12444	4981
20985	7590	12/05/2003	EXAMINER	
FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081			KUMAR, SRILAKSHMI K	
			ART UNIT	PAPER NUMBER
			2675	

DATE MAILED: 12/05/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,209

Applicant(s)

LIGHT, JOHN J.

Examiner

Srilakshmi K. Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4, 7, 14, 17, 24 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 4, 7, 14, 17, 24 and 27 recites the limitation "the camera" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zwern (US 6,084,556).

As to independent claims 1, 11 and 21, Zwern discloses a method and apparatus of displaying a virtual three dimensional scene (Figs. 1, 3 and 6), comprising;

a memory that stores executable instructions; Zwern discloses a computer, item 12, it would have been obvious to one of ordinary skill in the art that the computer would have a memory that stores executable instructions; and

a processor (computer, item 12) that executes the instructions to: track a positional change of a head of a user with respect to a display (col. 6, lines 52-60); transform the virtual 3D scene in accordance with the positional change of the head (col. 6, lines 52-67, col. 10, lines 29-41); and project on the display a transformed virtual 3D scene (col. 6, lines 52-67, col. 10, lines 29-41).

As to dependent claims 2, 12 and 22, limitations of claims 1, 11 and 21, and further comprising, wherein transforming the virtual 3D scene comprises shifting the virtual 3d scene in a left direction of the user when the head moves in a right direction of the user. Zwern discloses in col. 6, lines 52-67, where when the user moves his head to the right, what is shown on the display is what was to the right of the previous scene, therefore it would have been obvious to one of ordinary skill in the art that if the 3d image would move to the left to show the scene on the right.

As to dependent claims 3, 13 and 23, limitations of claims 2, 12 and 22, and further comprising, wherein transforming the virtual 3d scene comprises shifting the 3d scene in a right direction of the user when the head moves in a left direction of the user. Zwern discloses in col. 6, lines 52-67, where when the user moves his head to the right, what is shown on the display is what was to the right of the previous scene, therefore it would have been obvious to one of ordinary skill in the art that if the 3d image would move to the left to show the scene on the right. Since Zwern discloses the moving to the left to shown the image to the right, it would have been obvious to one of ordinary skill in the art that the head and image would be able to move in the opposite direction as well.

As to dependent claims 4, 14 and 24, limitations of claims 3, 13 and 23, wherein the camera is attached to the display. Zwern discloses a camera in Figs. 1, 3 and 5. Although Zwern does not teach where the camera is attached to a display, it would have been obvious to one of ordinary skill in the art that a camera could have been shown to be attached to the display as the cameras on for computers are readily available to consumers.

As to dependent claims 5, 15 and 25, limitations of claims 1, 11 and 21, and further comprising, wherein transforming the virtual 3d scene comprises increasing a magnification of the virtual 3d scene when the head moves toward the display. Although Zwern does not disclose where the increase in magnification is accomplished by moving the users head, it would have been obvious to one of ordinary skill in the art that as the user moves his head the image changes (col. 6, lines 52-67), thus as the user moves his head towards the display, the image could have been magnified or zoomed.

As to dependent claims 6, 16 and 26, limitations of claims 5, 15 and 25, and further comprising, wherein transforming the virtual 3d scene comprises reducing the magnification of the virtual 3d scene when the head moves away from the display. Although Zwern does not disclose where the decrease in magnification is accomplished by moving the users head, it would have been obvious to one of ordinary skill in the art that as the user moves his head the image changes (col. 6, lines 52-67), thus as the user moves his head away from the display, the image could have decreased in magnification or zoom.

As to dependent claims 7, 17 and 27, limitations of claims 5, 15 and 25, and further comprising, wherein the camera is positioned above the display. Zwern discloses a camera in Figs. 1, 3 and 5. Although Zwern does not teach where the camera is attached to a display, it

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would have been obvious to one of ordinary skill in the art that a camera could have been shown to be attached to the display as the cameras on for computers are readily available to consumers.

As to dependent claims 8, 18 and 28, limitations of claims 3, 13 and 23, and further comprising, wherein the virtual 3d scene is shifted with respect to the head by a factor of 10. Zwern discloses in col. 6, lines 52-67, where when the user moves his head to the right, what is shown on the display is what was to the right of the previous scene, therefore it would have been obvious to one of ordinary skill in the art that if the 3d image would move to the left to show the scene on the right. Since Zwern discloses the moving to the left to shown the image to the right, it would have been obvious to one of ordinary skill in the art that the head and image would be able to move in the opposite direction as well.

As to dependent claims 9, 19 and 29, limitations of claims 1, 11 and 21, and further comprising, wherein tracking the positional change of the head further comprises tracking an iridescent color in an object attached to the head. Although Zwern does not disclose tracking an iridescent color in the object attached to the head, it would have been obvious to one of ordinary skill in the art that the position tracker could have been programmed to track in different ways as disclosed in col. 14, lines 14-42.

As to dependent claims 10, 20 and 30, see limitations of claims 2, 3, 12, 13, 22 and 23, above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Srilakshmi K. Kumar** whose telephone number is **(703) 306 5575**.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 703 306 5575. The examiner can normally be reached on 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven J. Saras can be reached on 703 305 9720. The fax phone number for the organization where this application or proceeding is assigned is 703 872 9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 4700.

Srilakshmi K. Kumar
Examiner
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SKK

November 25, 2003



STEVEN SARAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600